Special Issue

Omics Approaches to Study Toxins

Message from the Guest Editor

In the era of systems biology and biomedical big data, new developments in multi-omics technologies allow researchers to study living systems in ways that are not possible by investigating single biomolecules in isolation. Emerging trends in omics-based research have spread to many diverse disciplines, and the study of toxins is no exception. Over the past several decades, omics approaches have been used to profile the biochemical makeup of crude toxins, understand the genetic/metabolic mechanisms that underlie toxin synthesis in vivo, and explain the evolutionary origins of toxins and the roles they play in ecosystems. Importantly, these omics methods can be applied to both toxins (e.g., venom gland proteomics) and the systems those toxins act upon (e.g., effects of toxins on differential gene expression).

In this Special Issue, we seek to assemble a broad collection of original research studies describing innovative omics-based approaches for quantifying and understanding toxins and the effects they have on living systems. We are particularly interested in highlighting novel methods for data collection and analysis, and applications that leverage multiple omics technologies.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Toxinology is an incredibly diverse area of study, ranging from field surveys of environmental toxins to the study of toxin action at the molecular level. The editorial board and staff of *Toxins* are dedicated to providing a timely, peer-reviewed outlet for exciting, innovative primary research articles and concise, informative reviews from investigators in the myriad of disciplines contributing to our knowledge on toxins. We are committed to meeting the needs of the toxin research community by offering useful and timely reviews of all manuscripts submitted. Please consider *Toxins* when submitting your work for publication.

Editor-in-Chief

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